# INTERNET OF THINGS SENIOR LEVEL

IoT (Internet of Things) in agriculture leverages interconnected devices and sensors to enhance farming operations, improving efficiency and resource management. Key applications include:

**Smart Irrigation:** Automates irrigation based on soil moisture data, conserving water and boosting crop yields.

**Precision Farming:** Uses data on soil, weather, and crop health to optimize planting and harvesting.

**Environmental Monitoring:** Sensors monitor conditions like temperature and humidity to optimize growing environments.

## Problem statement:

To help the younger generation understand the challenges of automation in agriculture, we are organizing a competition where participants create an IoT device for agricultural use. The competition consists of three rounds: Preliminary, Zonal, and Final. Participants will start with an idea and develop it into a working prototype.

## PRELIMINARY LEVEL

### Participation:

Students must prepare a document for an agriculture-related device using Internet of Things (IoT) technology. The document should include:

- Project Materials: List all components and materials used.
- How the Project Works: Explain the functionality and operation of the IoT solution.
- Benefits: Describe the advantages and potential impact on agricultural practices.
- Student Details: Include names, college, and location.

### Submission Requirements:

- The document must be in PDF format and should not exceed two pages.
- No AI-generated tools are allowed for document creation.
- The document should be sent via email to bharatteckleague@gmail.com.

# ZONAL LEVEL

## Competition:

- Teams selected from the prelims must participate in the zonal level through software simulation on-site.
- Students will have a maximum of 3 hours to create and complete their IoT project simulation in their laptop.
- Teams must bring one laptop per team with the required simulation software installed. No internet access will be provided until evaluation.

## Presentation & Judging:

- Teams must present their virtual device and demonstrate its functionality using the simulation software.
- Evaluation will be based on the performance and explanation of the simulated IoT project.

# FINAL LEVEL

## Competition:

- Teams selected from the zonal level must bring all necessary components, tools and equipment to the venue for the final level.
- In the final level, teams will construct the hardware of their IoT device on-site.
- Teams will present their completed IoT devices to the judges, including a detailed PowerPoint presentation explaining the design, functionality, and benefits.

## Performance Judging:

- Judges will evaluate the teams based on the functionality and portability of the prototype IoT device, as well as presentation skills.